

METHOD FOR MANUFACTURING QUARTZ GLASS INGOT  
AND A MANUFACTURING APPARATUS

~~Abstract~~

ABSTRACT

The invention provides a method for manufacturing ~~quartz glass~~a large scale quartz glass slab ingot in a flame hydrolysis reaction in a furnace, including the steps of rotating the furnace, depositing a fused silica on a furnace bed, and extending the deposit outwardly by heating and rotation of the furnace, thereby a quartz glass slab ingot is obtained. A quartz glass burner is installed at the ceiling of the furnace, hydrogen gas supplied to the burner ~~is flowing~~flows down along the tapered wall of the oxygen chamber and ~~being~~is ejected into the outer casing ~~part~~. Part of the hydrogen gas is deflected to the center of the burner, and mixed with the oxygen just after the ~~eject~~ejection from the oxygen gas nozzles ~~thereby~~. Thereby, the flame is formed smoothly and the thermal efficiency is improved<sub>7</sub>. The flame becomes wide enough and the silica powder transported by the hydrogen gas is uniformly fused by the flame and heat capacity of the fused silica.